DEPARTMENT OF THE AIR FORCE
2D AEROSPACE MEDICINE SQUADRON (AFGSC)
BARKSDALE AIR FORCE BASE, LOUISIANA

8 May 2014

2013 Water Quality Report for Barksdale AFB

Public Water Supply ID: LA1015022

The U.S. Environmental Protection Agency (US EPA) requires that drinking water suppliers throughout the country provide a water quality report to their customers on an annual basis. This is the Barksdale AFB's water quality report for calendar year 2013. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. If you have any questions about this report, want to attend the Quarterly Water Quality Meeting, or simply want to learn more about your drinking water, please contact Bioenvironmental Engineering at (318) 456-6730.

Barksdale AFB Water Source

Barksdale AFB purchases water from the Shreveport Water System (LA1017031). Shreveport gets their water from the Cross Lake Watershed (area which is drained by streams flowing to the lake) which consists of about 260 square miles of land, roughly 2/3 of which is located in Caddo Parish and 1/3 of which is located in Harrison County, Texas. Most of the watershed is undeveloped timberland, but a significant portion is urban or suburban land, within the city limits. During dry periods, Cross Lake is supplemented with water pumped from Twelve Mile Bayou.

A Source Water Assessment Plan (SWAP) is now available from our office. This plan is an assessment of the delineated area around our water sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the SWAP our water system had a susceptibility rating of 'LOW' for any potential contamination. If you would like to review the SWAP, please contact our office at (318) 456-6730.

Health Information

The EPA mandates that all public water systems includes the following in their water quality reports:	
•	The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.
•	Contaminants that can be expected in untreated source water include: *microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; *inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; *pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; *organic chemical contaminants,* including synthetic and volatile organic chemicals from industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and *radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.
•	To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.
•	Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).
•	Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

Definitions for Tables:

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
Maximum Contaminant Level (MCL): The "Maximum Allowed" MCL is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum Contaminant Level Goal (MCLG): The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Nephelometric Turbidity Unit (NTU): Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Parts per million (ppm) or Milligrams per liter (mg/L): One part per million corresponds to a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter (ug/L): One part per billion corresponds to a single penny in $10,000,000.
Picocuries per liter (pCi/L): Picocuries per liter is a measure of radioactivity in water.
Locational Running Annual Average (LRAA): annual average of results at each monitoring site

2013 DETECTED SUBSTANCES[1]

Substance	Unit	MCL	MCLG	Highest Average	Range	Major Source	Violation
Lead[2,3] (2010-2012)	ppb	AL = 15	0	90th Percentile = 1	1 – 2	Corrosion of household plumbing systems; erosion of natural deposits	NONE
Coliform[4] (TCR)	--	Systems that collect <40 samples per month = no more than 1 positive monthly sample	0	2 positives in Nov '13	--	Naturally present in the environment	MCL
Regulated Contaminants	NO DETECTED RESULTS WERE FOUND IN THE CALENDAR YEAR 2013						

	Additional Required Health Effects Information
1	Tests were run on numerous substances. Only the listed substances were detected at any level.
2	Analyses are conducted every three years. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Sampling for lead and copper was last performed in July 2012.
3	If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Barksdale AFB Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.
4	In November 2013, the system tested positive for total coliform bacteria during two separate sampling events. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. No harmful bacteria such as E. Coli were found during this incident and all subsequent re-samples were negative for bacteria after medical and civil engineering investigated the system. The coliform incident was communicated to affected personnel in the form of a hand-delivered letters to affected residents. The notice was also posted in December 2013 by Public Affairs through the Barksdale AFB newspaper and base website. There are no additional required health effects violation notices.

Disinfection Byproducts	Sample Point	Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source	Violation
TOTAL HALOACETIC ACIDS (HAA5)	CHILD DEVELOPMENT CENTER	2013	20	8.17 - 24.8	ppb	60	0	By-product of drinking water disinfection	None
HAA5	FUELS	2013	19	8.65 - 20.3	ppb	60	0	By-product of drinking water disinfection	None
HAA5	HANGER ONE	2013	17	8.68 - 29.6	ppb	60	0	By-product of drinking water disinfection	None
HAA5	OFF LOAD FACILITY	2013	15	7.23 - 17.1	ppb	60	0	By-product of drinking water disinfection	None
Total Trihalomethanes[5] (TTHM)	CHILD DEVELOPMENT CENTER	2013	38	5.32 - 85.4	ppb	80	0	By-product of drinking water chlorination	None
TTHM	FUELS	2013	38	4.9 - 78.4	ppb	80	0	By-product of drinking water chlorination	None
TTHM	HANGER ONE	2013	36	4.7 - 74.6	ppb	80	0	By-product of drinking water chlorination	None
TTHM	OFF LOAD FACILITY	2013	40	4.9 - 47.2	ppb	80	0	By-product of drinking water chlorination	None
5	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and many have an increased risk of getting cancer.								

Third Unregulated Contaminant Monitoring Rule (UCMR3)

The Consumer Confidence Rule, published on August 19, 1998 (63 FR 44511), requires community water systems (CWS)s to report unregulated contaminant monitoring results whenever they are detected (i.e., are reported above the minimum reporting level [MRL]). Unregulated contaminants are those that don't yet have a drinking water standard set by US EPA. The purpose of monitoring for these contaminants is to help US EPA decide whether the contaminants should have a standard.

During 2013 Barksdale coordinated with LA Dept of Health and Hospitals agency and local certified laboratories to test for a set of 21 chemicals in four quarterly calendar periods to comply with the UCMR3 program. Five chemicals or metals of the 21 were detected above MRLs during each quarter. These are vanadium, strontium, chromium, chromium-6 and chlorate. All other chemicals or metals were non-detectable.

UCMR3 chemical or metal detected in 2013 sampling	Results of highest detection in micrograms/Liter (part per billion)	Current EPA limit (part per billion)
Chromium	7.6	100
Chromium-6	0.1	No established limit or standard
Vanadium	1.6	No established limit or standard
Strontium	240	No established limit or standard
Chlorate	630	No established limit or standard

These levels are very low in part per billion levels and are not an indication of any health risks. More information on UCMR3 testing is available here: http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx and here http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/basicinformation.cfm

The Barksdale AFB Bioenvironmental Engineering Office along with Civil Engineering, Hunt Military Communities and Family Housing are proud of the opportunity to provide and monitor clean drinking water for you. We work around the clock to ensure top quality drinking water at every tap. We ask that all our personnel help us protect and conserve our water sources. Thank you.